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Nurse-Patient Relationship in Stroke Rehabilitation Units: A Systematic Literature Review

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Stroke has recently become a global threat to the adult age group. It is the major cause of disability among adults. Moreover, this dramatic increase in the number of stroke survivors has also increased the need of rehabilitation. Rehabilitation is an essential part of recovery after stroke. However, this long rehabilitation process needs a foundation of the therapeutic relationship. Research has been done about nurse - patient relationships but no research found concerning stroke rehabilitation.

The purpose of this thesis is to describe the nurse-patient relationships in stroke rehabilitation units using systematic literature review. The aim of the study was to critically examine the nurse-patient relationships in the context of stroke rehabilitation applying systematic literature review in order to maximize intervention opportunities.

A systematic literature review was carried out through NELLI electronic library. Four electronic databases were used; PUBMED, EBSCO (CINAHL), EBSCO (Academic Search Elite), and SAGE. Following pre-determined criteria of full text articles, English language and articles published from 2005 to 2014; a total of 8 articles were finally identified and analyzed for the study.

The findings revealed four descriptive categories of nurse-patient relationship: therapeutic communication, patient-centered care, maintaining boundaries and nursing interventions applied to improve the nurse-patient relationships. The relationships during stroke rehabilitation were based on the foundation of therapeutic interactions. The study could be referred to by other researchers and nurses while considering interventions or improvements in the nurse-patient therapeutic relationships. For future recommendations, further research is needed using action based research.

Key words: Nurse, Patient, Nurse-patient Relationship, Stroke Rehabilitation Unit

TABLE OF CONTENTS

1	Introduction	5
2	Theoretical framework	7
2.1	Nurse	7
2.2	Patient	7
2.3	Nurse-Patient Relationship.....	8
2.4	Stroke	8
2.5	Stroke Rehabilitation Unit.....	10
3	Purpose of the thesis and research questions.....	12
4	Search Methodology	13
4.1	Systematic Literature Review	13
4.2	Data Search	14
4.3	Inclusive and Exclusive Criteria.....	16
	Data Extraction	17
4.4	Data Analysis	19
5	Findings	24
5.1	Therapeutic Communication	25
5.1.1	Communication strategies	25
5.1.2	Interpersonal skills	25
5.2	Patient-centered care (PCC).....	27
5.2.1	Whole person care	27
5.2.2	Coordination and communication	28
5.2.3	Support and empowerment.....	29
5.2.4	Ready access	29
5.2.5	Patients' autonomy	30
5.3	Maintaining boundaries	30
5.3.1	Self-care approach	31
5.3.2	Physical boundaries	31
5.4	Nursing interventions	32
5.4.1	Staff support	32
5.4.2	Patients' support	33
6	Discussion	34
7	Trustworthiness	37
8	Ethical Consideration	39
9	Limitations and recommendation	40
	Appendices	47

1 Introduction

Stroke is the second leading cause of disability, after dementia (World heart federation, 2012). According to research made by the world health organization (2014), annually 15 million people suffer from stroke, of which about 6 million die and another 5 million are left permanently disabled. The numbers of stroke survivors in need of assistance in daily living is at a gradual increase and this requires increased attention for more healthcare planning and rehabilitation units. About half of stroke survivors are left with some degree of physical or cognitive impairment (Di Carlo 2009). These patients need a lot of attention and care in order to be rehabilitated.

In Finland, stroke is the third leading cause of death following coronary heart disease and cancer (Meretoja 2012). It was mentioned in the Helsingborg declaration 2006 on the European stroke strategies that, more than 85% of stroke patients survive the first month after stroke (Kjellström, Norrving & Shatchkute 2007). This indicates the high need of treatment and rehabilitation. Stroke is also the third expensive disease in Finland and major cause of disability among adults. Hemorrhage stroke was calculated in 2009 the most expensive type of stroke with a hospital cost index of over 25,000 Euros in 2007 (Meretoja, 2012). Moreover, a lot of effort has been put in the prevention of stroke thus reducing the stroke mortality rate by 20% from the level of 2005.

Every year, thousands of people survive strokes only to become locked in an arduous struggle to regain lost function; with the help of modern rehabilitation techniques, many are able to resume a normal or near-normal lifestyle (Harvard Medical School 2011). Rehabilitation is a continuous process and patients rehabilitate themselves depending on the comprehensive approach of care. It is the job of professional caregivers to support their patients during the rehabilitation process, and nurses are in the key position of providing support on the wards. However, to give this support to the patient's satisfaction, a therapeutic nurse-patient relationship is required.

For many years, the relationship between nurses and patients has been used as one of the tools to determine patient's satisfaction. Nurse-patient relationship based on previous researches is the "core of nursing" (Halldorsdottir 2008). Mosby's medical dictionary defines it as a therapeutic relationship between a nurse and a patient that gradually develops with a series of interactions. It is central to meeting the patient's care needs and therefore communication between the nurse and patient is the foundation on which this relationship is built (Webb 2011, 20). Nurses spend more time with patients than other professionals; therefore they are most likely to influence this therapeutic relationship through their actions.

The nurse is the one who is always responsible for establishing and maintaining the boundaries with the clients regardless of how the patient behaves.

Apparently, the growing necessity of nursing care to stroke survivors has called for improvement in the nurse-patient relationships on stroke units. There is little research done about these therapeutic relationships and their interventions. The purpose of this systematic literature review study is to describe the nurse-patient relationships in stroke rehabilitation units using systematic review. The aim of the study was to critically examine the nurse-patient relationships in the context of stroke rehabilitation applying systematic literature review in order to maximize intervention opportunities. Systematic reviews provide practitioners a vehicle to gain access to such pre-filtered evidence with the aim to synthesize the results of multiple original studies by using strategies that delimit bias (Schlosser 2006).

2 Theoretical framework

2.1 Nurse

Nurses are great contributors to the health care systems; they play a vital role as skilled professionals in different care settings and also as leaders who can dramatically influence the quality of care and overall performance of the system into the future (Kentucky Nurses Association 2013). Nursing is the largest health care profession with more than 3.1 million registered nurses practicing nationwide. Most health care services involve some form of care by nurse (American Association of Colleges of Nursing 2010). Nurses are trained professional from a medical school devoted to prevent, alleviate and cure diseases and injuries. They are responsible for the planning, management and evaluation of the care of patients. Their duties include, supervision of other healthcare workers, working in teams with medical doctors and other professionals with the aim of preventive and curative measures (International Standard Classification of Occupations 2008).

According to the association of Rehabilitative Nurses, nurses in rehabilitation settings help patients adapt to their disabilities, achieve their greatest potential, and work toward productive, independent lives. Care is done using a holistic approach to meet patients' needs. They provide comfort, therapy and education, promote health-conducive adjustments, support adaptive capabilities, and promote achievable independence to the patient. Nurses work with patients in collaboration to their family members, to create a recovery plan, set short and long-term goals, eventually helping the patient to live as independent as possible. As a Rehabilitation Nurse, one has the opportunity to form lasting relationships with patients.

2.2 Patient

A patient is sometimes referred to as a medical client. It is a person waiting to receive or undergo medical treatment. Oxford dictionary defines a patient as an individual receiving or registered to receive medical treatment. Epstein and street (2011) defined patients as persons in context of their own social worlds, listened to, informed, respected, and involved in their care and their wishes are put into consideration during their health care.

2.3 Nurse-Patient Relationship

The nurse-patient relationship is a professional and therapeutic relationship that guarantees that the patient's need is considered as the priority. It exists to meet the needs of the patient, not the needs of the nurse. The nurse is always responsible for establishing and maintaining boundaries with clients, regardless of how the patient behaves (College of Nurses of Ontario 2006).

Patient-centered communication is a basic component of nursing. It aids in the development of a good nurse-patient relationship along with other organizational factors and results in the delivery of quality nursing care (McCabe 2004). The relationship depends on the interaction of thoughts, feelings, and actions of each person. The patient will experience better health when all their needs are fully considered in the relationship. It is also based on trust, respect and professional intimacy and also requires appropriate use of authority. A patient's dignity, autonomy, privacy are kept safe in this relationship (College of Registered Nurses of British, Columbia 2006).

2.4 Stroke

Stroke is a common disease with high death rates and high levels of disability among survivors (Sturm, Dewey, Donnan, MacDonnell, McNeil & Thrift 2002). It is a form of cardiovascular disease affecting the blood supply to the brain also known as cerebrovascular disease or apoplexy (Black 1992). A stroke occurs due to interruption of the blood supply to the brain, usually because a blood vessel bursts or is blocked by a clot. The brain cells die when they are cut off from oxygen and nutrients from the blood due to blockage or bleeding in or around the brain.

There are two forms of stroke: ischemic and hemorrhagic stroke. Ischemic stroke is the obstruction of a blood vessel supplying the brain. It can occur in two ways, that is, embolic and thrombotic. In embolic stroke, a blood clot forms in any part of the body and travels through the blood to the brain where it goes to a smaller vessel, thus blockage. Whereas thrombotic stroke occurs when blood flow is impaired due to blockage to one or more of the arteries supplying blood to the brain. Hemorrhagic stroke occurs as a result of bleeding into or around the brain. It occurs when there is breakage or "blowout" of a blood vessel in the brain (National stroke association 2014). Hemorrhages are usually caused by different disorders which affect the blood vessels, which may include hypertension (high blood pressure) and cerebral aneurysms. The most common form of stroke in both men and women is the Ischemic stroke. The figure 1 below shows a clear view of the different forms of stroke.

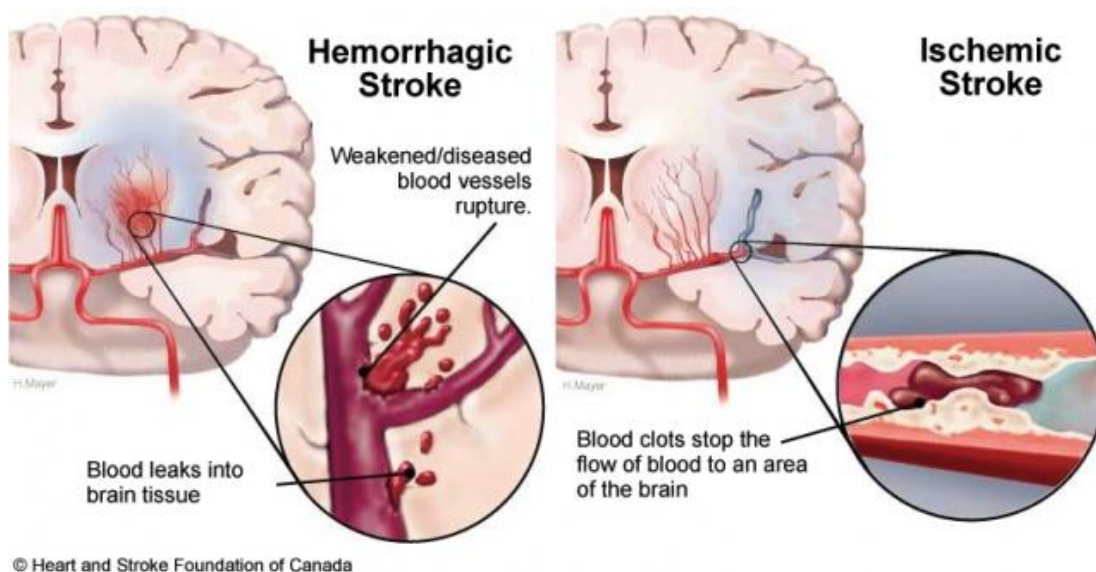


Figure 1: The two forms of stroke (University of Arizona, 2014)

The most common symptom of a stroke is sudden weakness or numbness of the face, arm or leg, most often on one side of the body. The effects of a stroke depend on which part of the brain is injured and how severely it is affected (World Health Organization 2014). The brain is divided into two hemispheres. The Left hemisphere includes major factors of speech, writing, and movement of the right side of the body. Whereas the right hemisphere includes the main factors of creativity, sensation and movement of the left side of the body. The outcome of stroke differs from the affected side of the brain. A stroke occurring in the left side of the brain may affect a person's ability to speak, write and movement of the right side of the body. The figure 2 below shows the functioning of the brain in the two hemispheres.

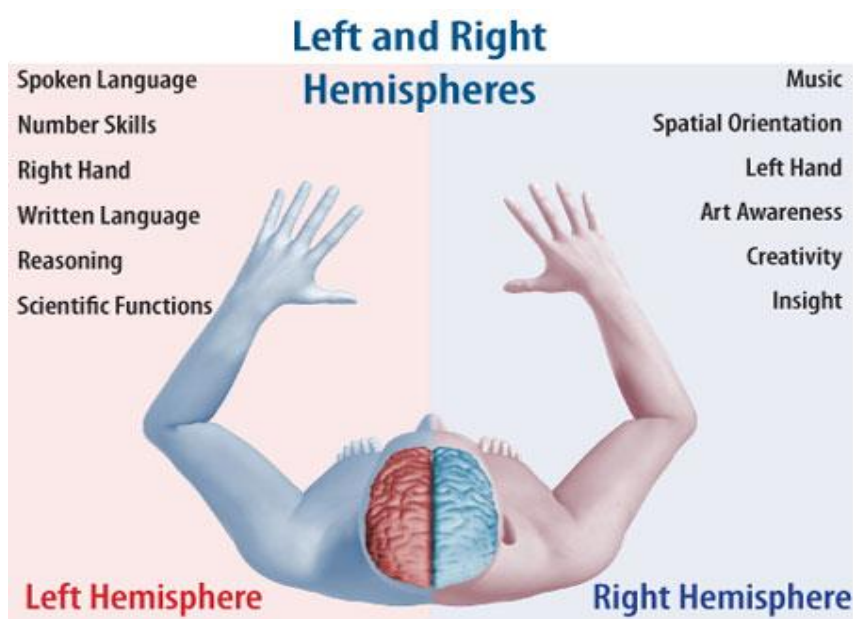


Figure 2: Brain hemispheres (Mountain States Health Alliance, 2014).

Generally, stroke can result to five types of disabilities which may include: paralysis, sensory disturbances including pain (paresthesia), cognitive problems, problems using or understanding language (Aphasia) and emotional disturbances. The recurrence of stroke is common. Approximately 25% of people who recover from a first stroke will have another stroke within 5 years (National institute of neurological disorders and stroke 2014).

Although stroke is often viewed as a disease of the elderly, it sometimes affects younger individuals. The incidence of stroke does increase with age, but nearly a quarter of all strokes occur in people under the age of 60. Stroke can be prevented through looking out for the risk factors which may include; high blood pressure, high cholesterol, diabetes, heart diseases, TIA, elevated hematocrit, smoking, drugs, age and many more (Zaret et al. 2002).

2.5 Stroke Rehabilitation Unit

Each year approximately 5 million people are left disabled after stroke (WHO 2014). In order for stroke survivors with disabilities to go back to living independently, rehabilitation at a stroke unit should be performed. A stroke rehabilitation unit is a geographically located area which admits stroke patients after a delay of 1-2 weeks and continuing care for several weeks if required (Langhorne & Dennis 2008). The level and period of rehabilitation is individual. The extent to which handicap may be improved through physical and economic resources and social support cannot be determined, more evaluation of rehabilitation and community support programs effectiveness is needed (Sturm et al. 2002). The recoveries are viewed by multi-disciplinary professionals as an improvement in clinical indicators such as physical, cognitive, and emotional functioning and accomplishing activities daily living (Rose William, Roskell, & Pandyan 2011).

Rehabilitation takes place on different rehabilitation units and these may include: home health services, nursing care facilities, hospitals and others. The advantages of these units are; physical structure is made more favorable to rehabilitation, the team should be facilitated, staff morale should be higher, routine record keeping and follow-up are more easily managed; the psychological advantage of moving from an acute hospital into a rehabilitation unit is a step towards moving back to community (Greenwood, McMillan, Barnes & Ward 2003). It aims at helping stroke survivors to gain maximum normal functioning after the occurrence of stroke that is; focusing on getting back the patient to normal lifestyle and independence in daily activities. The stroke unit is the backbone of integrated stroke services/chain of care because there is sufficient evidence that the health outcomes of patients managed in dedicated stroke units are better than those of patients managed in general medical wards (Kjellström et al. 2007).

The National institute of neurological disorders and stroke in 2014 described the goal of rehabilitation targeting at enabling a person who survived a stroke to achieve most probable independence and as productive as possible. In other words, it is a procedure that is intended to specifically to recuperate the individual after stroke.

3 Purpose of the thesis and research questions

The purpose of this thesis is to describe the nurse-patient relationship in stroke rehabilitation units using systematic literature review.

Research Questions:

How is the nurse-patient relationship in stroke rehabilitation units?

What nursing interventions have been applied to improve the nurse-patient relationship in stroke rehabilitation units?

4 Search Methodology

4.1 Systematic Literature Review

The research method used in this study is a qualitative approach. It was to summarize previous research literature on the nurse-patient relationships in stroke rehabilitation units, seeking for answers to the writers' research questions. As relevance of this thesis, systematic literature review was used during data collection. A number of steps were followed to convert the research questions into a research, and identify current knowledge with regard to relevant concepts and contexts. These included firstly, referring back to the keywords, identifying synonyms, limiting the search by setting a criteria, and data extraction.

Systematic reviews have progressively been used as a corner stone for policy and healthcare decisions being that they offer a reliable, transparent, clear and reproducible way of organizing, evaluating, analyzing and interpreting existing evidence. 'Systematic reviews have increasingly replaced traditional narrative reviews and expert commentaries as a way of summarizing research evidence' (Hemingway & Brereton 2009). It is reviewed as a method that has been used widely to sum up previously researched literature focusing on a particular research question. A systematic literature review is conducted in a manner that identifies, selects, appraises and synthesizes high quality research evidence applicable to a given research question (Bettany-Saltikov 2012). It is also describe as a methodology used for integrating or comparing the results or findings from various qualitative studies (Grant & Booth 2009).

Systematic literature review as a methodology is advantageous in a way that; it integrates up-to-date and replicable information, resolves controversy between conflicting results, provides reliable basis for decision making and reduces systematic errors of bias. They tend to be more transparent than narrative review; however, they can be biased if the selection or emphasis of certain primary studies is influenced by the preconceived notions of the authors or funding sources (Garg, Hackman & Tonelli 2008). Publication bias means that positive results tend to be published in journals more frequently than negative results (Bruce, Pope, & Stanistreet 2008). Five steps of conducting a systematic literature include; firstly, framing the research question; secondly, identifying the relevant publications or literature; thirdly, assessing study quality; then summarizing the evidence from the studies and finally, interpreting the findings (Khan, Kunz, Kleijnen, & Antes 2003).

A wide search was performed looking at a specified type of studies and following a criteria determined at outset. To achieve relevant and reliable data, it is essential to keep the search as wide as possible because not all research materials is published or available in databases

and may not be easily assessed (Bruce et al. 2008). Making a wide search not only gives access to more sources, but also gives us access to the literature which was affected by publication bias. Systematic literature reviews are objective and transparent. Their aim is to avoid bias as much as possible. Researchers ought to use open methods in order to come up with reliable findings by aiming at reducing biasness (Cochrane library 2009).

4.2 Data Search



A systematic literature review proceeds with an explicit and reproducible protocol to locate and evaluate the available data (Bartolucci & Hillegass 2010). A literature search online is typically a starting point of gathering data. An electronic data search (NELLI) was built up in consultation with the information technology lecturer who gave us lessons on how to navigate the educational databases.

The data search process was done in three steps which included planning, searching, assessing and finally writing to maintain the systematic approach. What distinguishes systematic reviews from other traditional reviews and commentaries is the explicit and systematic approach (Khan et al. 2003). The research question was divided into 2 major keywords that is, 'nurse-patient relationships' and 'stroke rehabilitation'. 'Therapeutic relationships' and 'nurse-patient relations' were listed as the synonyms of 'nurse-patient relationships'. 'Therapeutic relationships can include relationship with professional staff (including nurses), peers and family members' (Forchuk, Schofield, Sircelj & Valledor 2001).

A number of four primary databases used were PUBMED, EBSCO (CINAHL), EBSCO (Academic Search Elite), and SAGE. Initial searches were made between 4th February 2014 - 29th February 2014, extracting information as regards to our thesis topic using the following keywords and mesh terms 'nurse-patient relationships', 'nurse-patient relations' and 'therapeutic relationships'. Three database searches were made various keywords such as 'Nurse-patient relations AND stroke rehabilitation', 'therapeutic relationships AND stroke rehabilitation' and 'Nurse-patient relations AND stroke rehabilitation'. The term 'units' did not increase the search results but instead narrowed the search noticeably.

Literature was filtered by criteria of articles published between years 2005 to 2014, full text (except Pubmed where free full text was used), and written in English. Choices of sources to be included were made according to the literature filtering criteria by scanning titles, abstracts as well as content of the articles. When the source met the selection criteria, it was then selected for review. A total of 221 articles were got from all the databases, 213 articles were discarded, and 20 articles were kept for evaluation from which 8 were selected for review. Table 1 illustrates the data search process used in this study.

Table 1: Illustration of the data search process

DATA BASES 					NO. OF ARTICLES FOUND FROM SEARCH	NO. OF ARTICLES DISCARDED (IRRELEVANT TITLE)	NO OF ARTICLES TO BE REVIEWED
SEARCH TERMS 	PUBMED	EBSCO (CINAHL)	EBSCO (ACADEMIC SEARCH ELITE)	SAGE			
Nurse-patient relationships and stroke rehabilitation	13	2	12	0	27	23	4
Nurse - patient relations and stroke rehabilitation	3	18	25	4	50	47	3
Therapeutic relationship and stroke rehabilitation	99	5	33	7	144	143	1
TOTAL	115	25	70	11	221	213	8

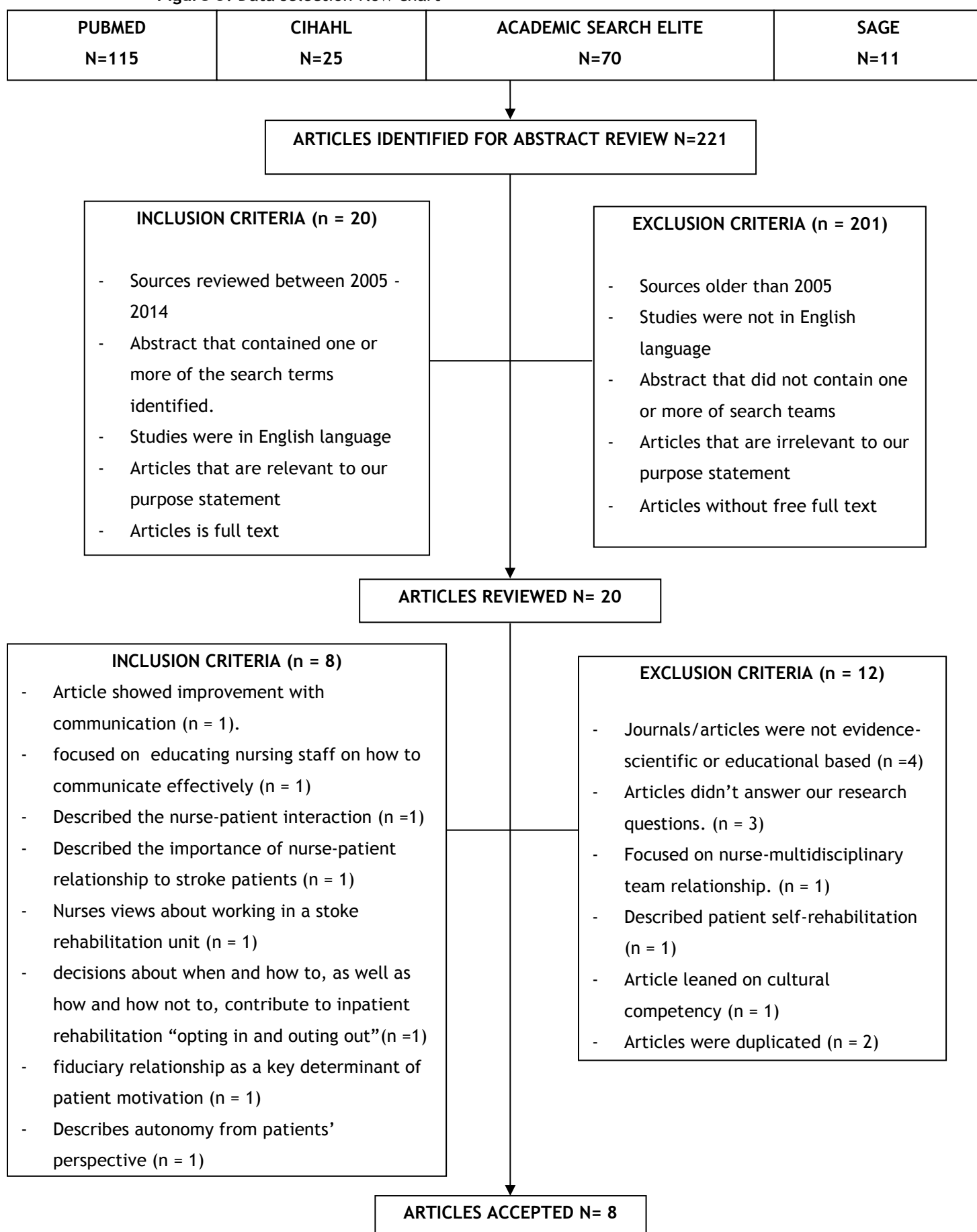
4.3 Inclusive and Exclusive Criteria

Inclusions and exclusions criteria play an important role in the search process. The data were selected based on the research question and purpose statement with criteria to guide the process. These criteria are set during research in order to give grounds for reliability of the work and to avoid bias and also to capture all studies of interest. Exclusion criteria are set of predefined criteria used to identify subjects which will not be included or which will have to withdraw from a research study after being included, while inclusion criteria are set of predefined characteristics used to identify subjects who will be included in a research study (Salkind 2010).

In this study, criteria used were full text articles which are in English language, published from year 2005 - 2014. English language was used since it is the language both writers could read and interpret well; using other language might have caused misinterpretation of information. Also full text articles were used in order to fully access materials relevant for the findings, published from year 2005 to 2014 to make the work more recent and updated. These criteria make up the roles guiding the search process and results. If the definitions of criteria are too limited there is a risk of missing very important studies which will limit the result. On the other hand, if the criteria are too generalized the review may contain information which is hard to compare and synthesize (Centre for Reviews and Dissemination 2009).

The search gave a total of 221 articles in which 201 were excluded and 20 were kept for review. Based on the purpose of the search and research question these 20 articles were reviewed and 12 were discarded leaving 8 for thorough review and analysis which met the purpose of the research. Figure 3 below shows how the inclusion and exclusion criteria were applied.

Figure 3: Data selection flow chart



Data Extraction

The aim of data extraction in this research is to gather data from different sources and use them to answer the research questions. It involves going back to primary articles and highlighting the relevant information that will answer the research question. However, to standardize this process and improve the validity of the results it was crucial to compile a data extraction form (The Cochrane Collaboration 2009). This phase is the most important, challenging and time consuming aspect of the methodology.

In order to reduce bias, data extraction forms should be defined and piloted when the study protocol is defined. The aim of this stage is to design data extraction forms to accurately record the information researchers obtain from the primary studies. In this way the readers can assess their rigor and the completeness and repeatability of the process (Kitchenham 2004).

In this study, data extraction was performed by two independent reviewers and differences reconciled by mutual agreement in order to establishing reliability and avoiding data entry errors (Wright, Brand, Dunn & Spindler 2007). Data extraction was based mainly on the purpose statement of the thesis and the research question so as to obtain the relevant data and also what needs to be in the thesis. The process was guided by the aim of the study, research question and the extraction criteria. Literature filter started with scanning titles, abstracts as well as content of the articles. This part was completed with a flow diagram to show the process. Selected articles needed for this study are listed showing the source, study objectives, title of articles, and participants during the study and findings in appendix 1 below.

4.4 Data Analysis

The quality and quantity of data is meaningless without proper analysis. Data analysis aims at organizing, structuring and bringing meaning from researched data (Polit & Beck 2004). It is a form of turning raw and unstructured data into organized information. Data analysis depends on purpose statement and research questions of the study. The researchers frame the findings according to research questions generated by the thesis (Speziale & Carpenter 2007).

In this study, qualitative approach of data analysis was used to answer the writers' research questions. Data analysis was done using qualitative synthesis, by systematically exploring researches on a topic, and putting the findings from selected studies together (Seers 2012). Data synthesis is very essential in systematic literature review methodology. It involves 'sifting' of the data and putting pieces together (Polit & Beck 2004). This thesis was written by two writers. The data analysis process was done with in four meeting session and all these sessions were attended by both writers.

The selected articles were read repeatedly and analyzed by both researchers to reduce wrong interpretation. Both writers organized the data carefully and argumentatively by thoroughly reading the search to find deeper meaning and understanding (Polit & Beck, 2004). The principles of systematic data synthesis were followed to reduce biasness. This was done by getting rid of superfluous data to construct accurate and reliable information. It is essential to be aware of personal bias during the research and interpretation process to improve accuracy and reliability of data (Speziale & Carpenter 2007).

The data was divided into four main categories and various sub categories answering the research questions respectively. The analysis of qualitative materials usually begins with a search of themes (Polit & Beck 2004). Four main themes of a nurse-patient relationship in stroke rehabilitation units and eleven sub categories are illustrated in figure 4 to 7 below.

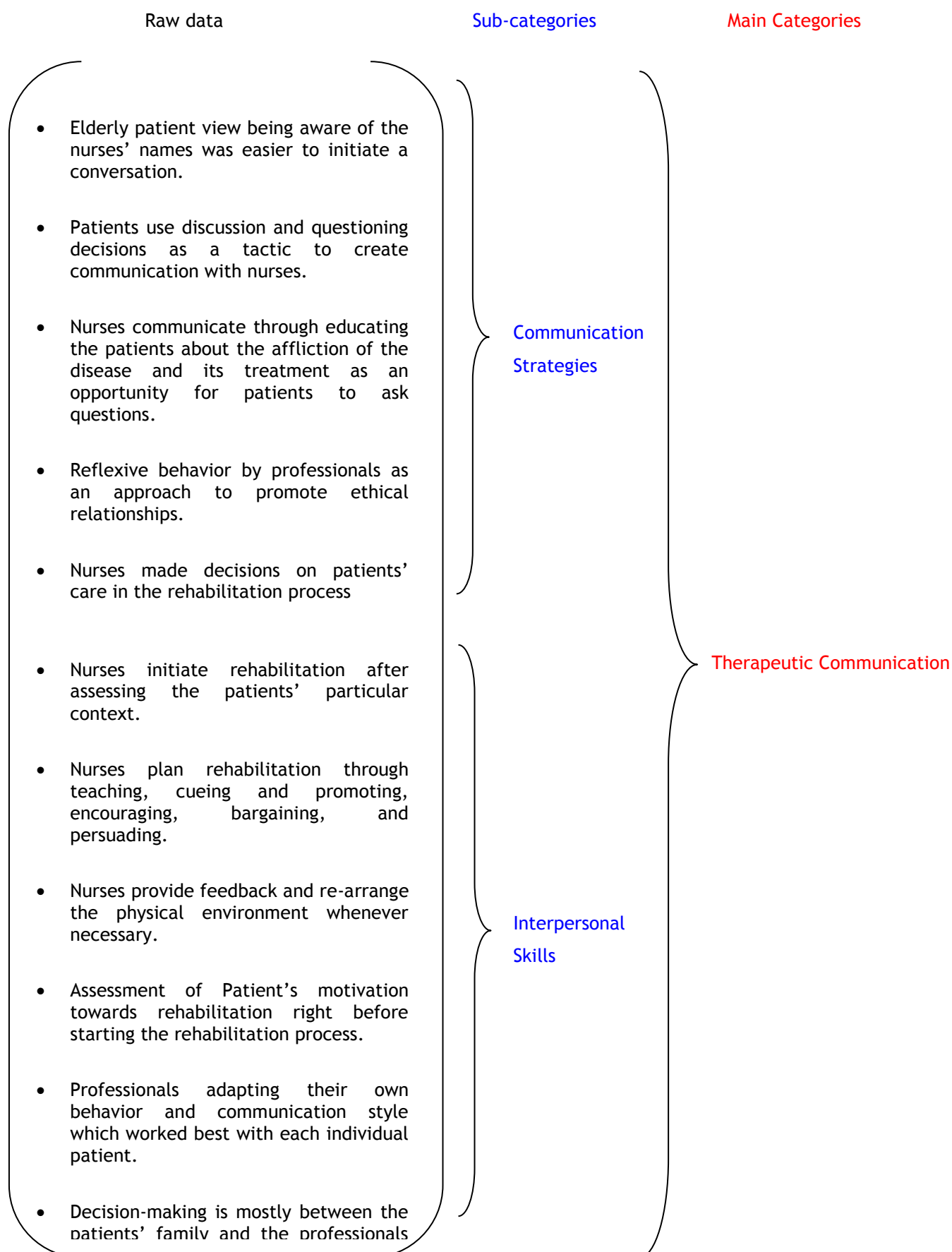
Figure 4: Data analysis for therapeutic communication

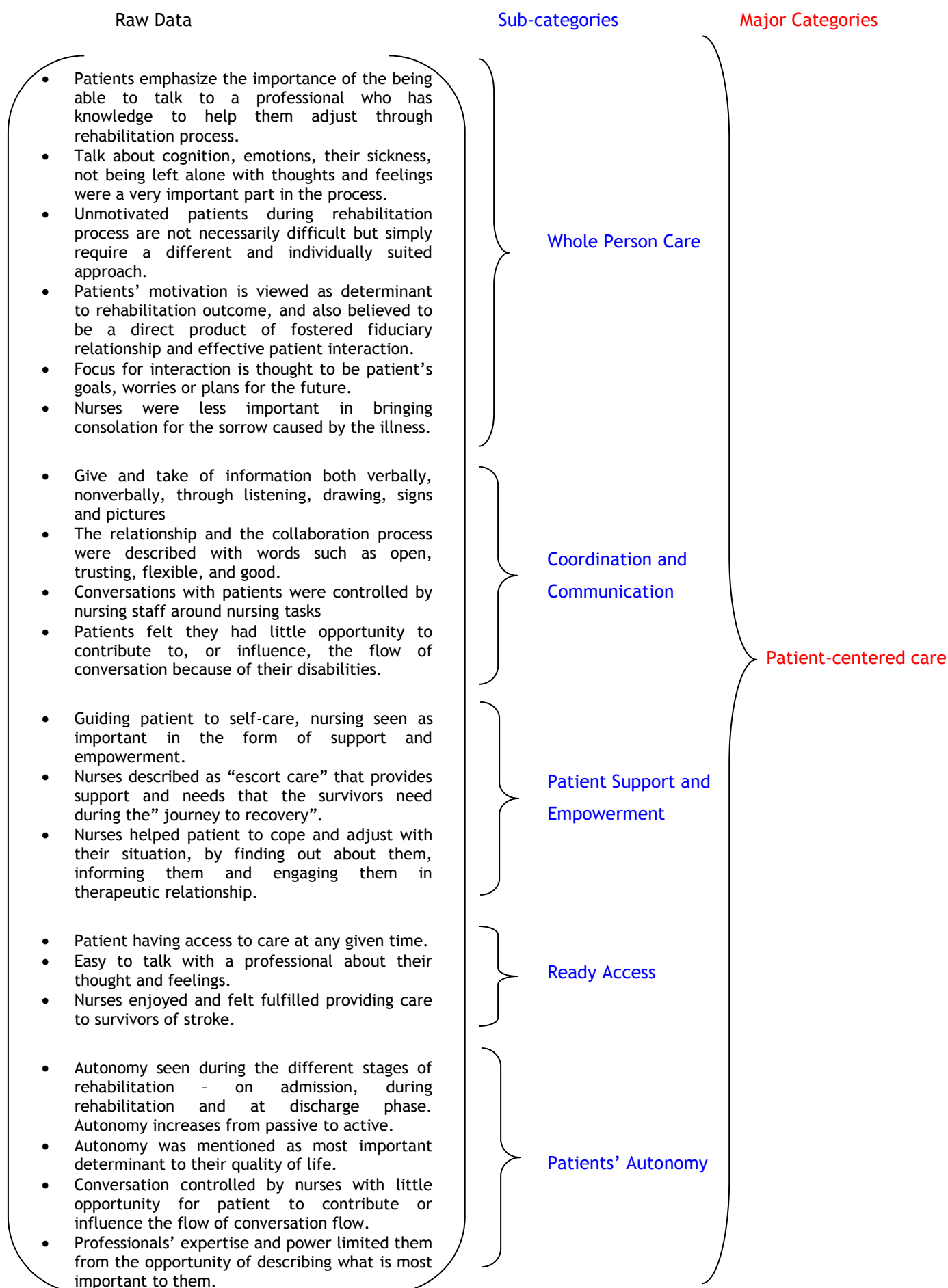
Figure 5: Data analysis for patient-centered care

Figure 6: Data analysis for maintaining boundaries

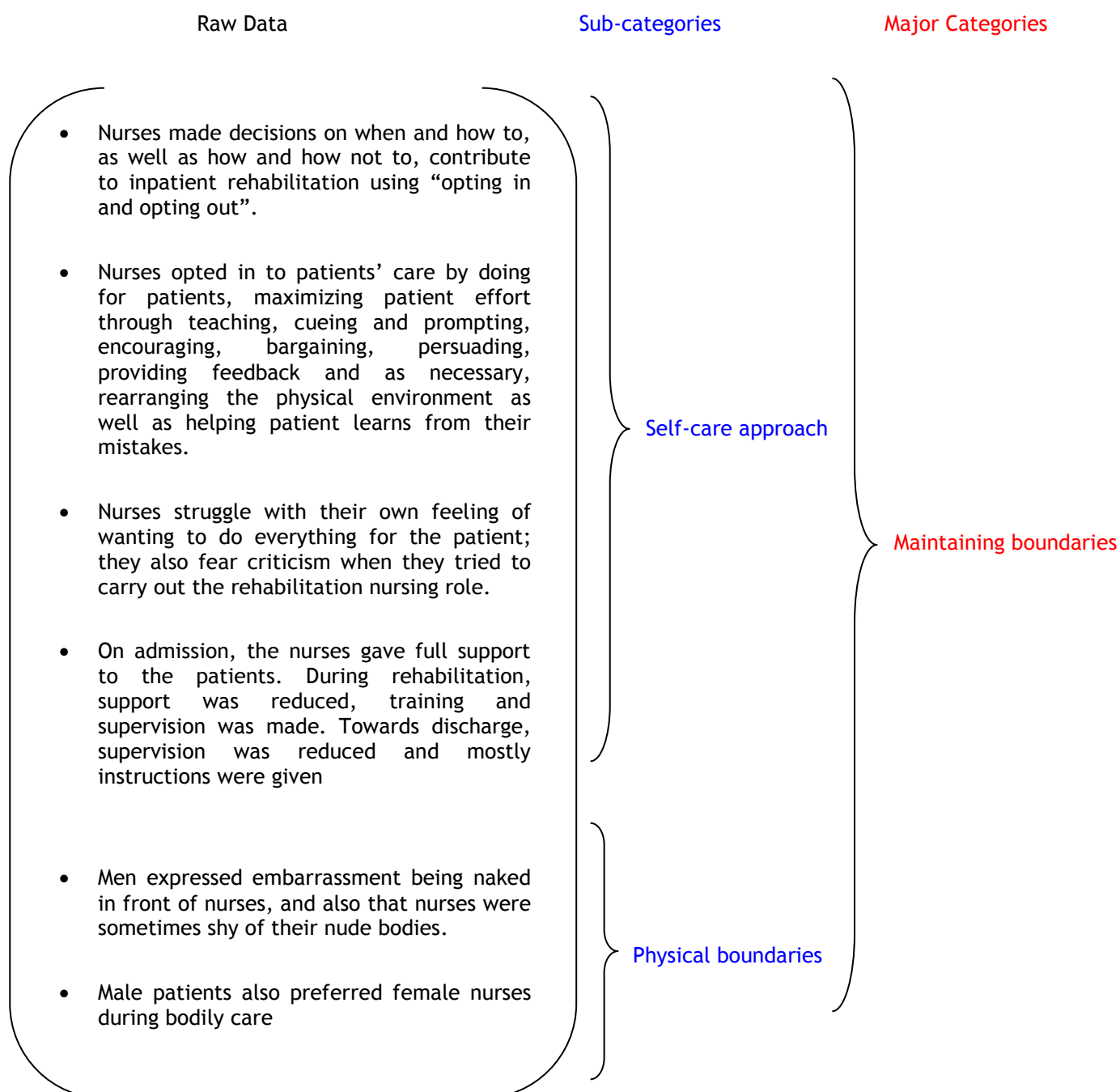
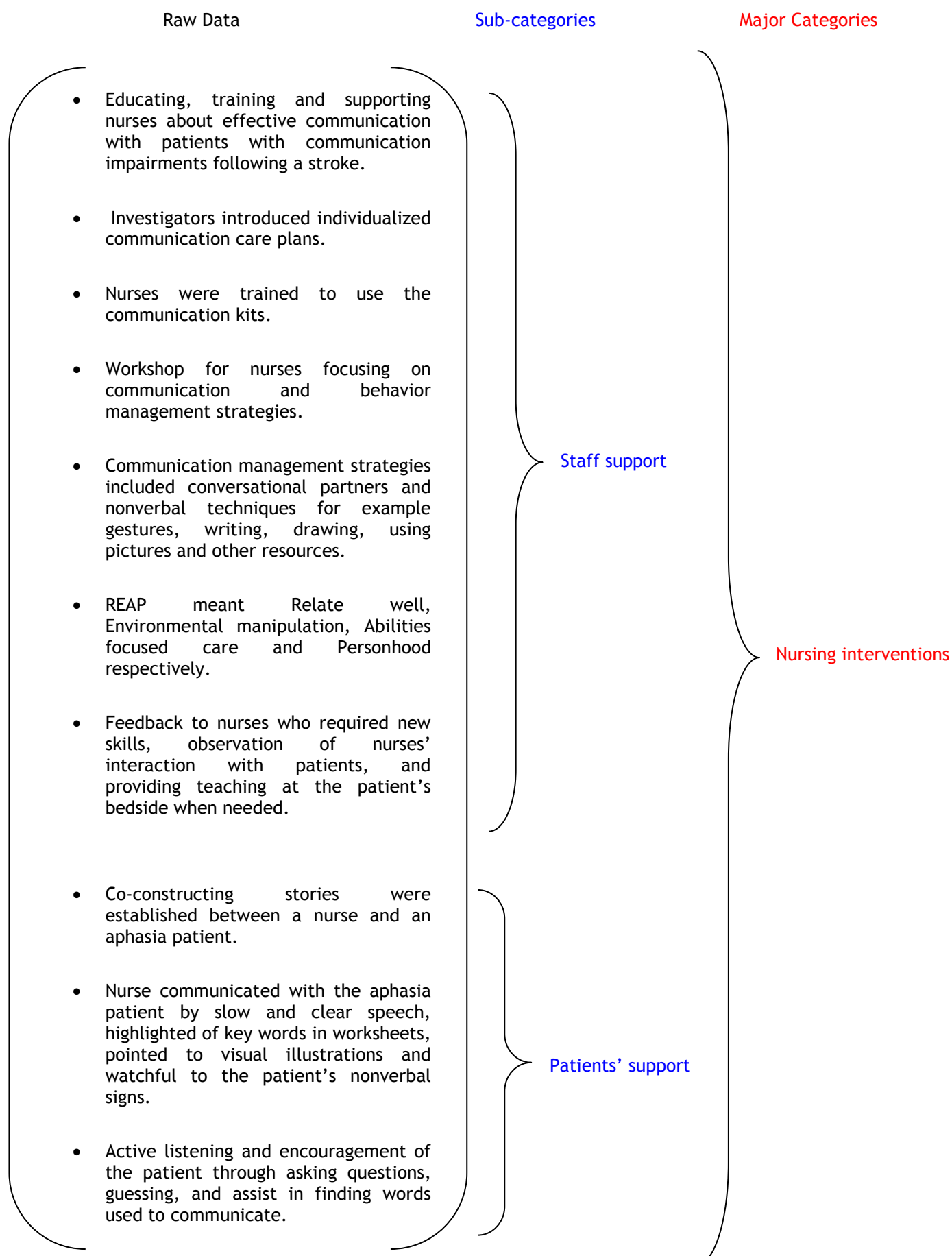
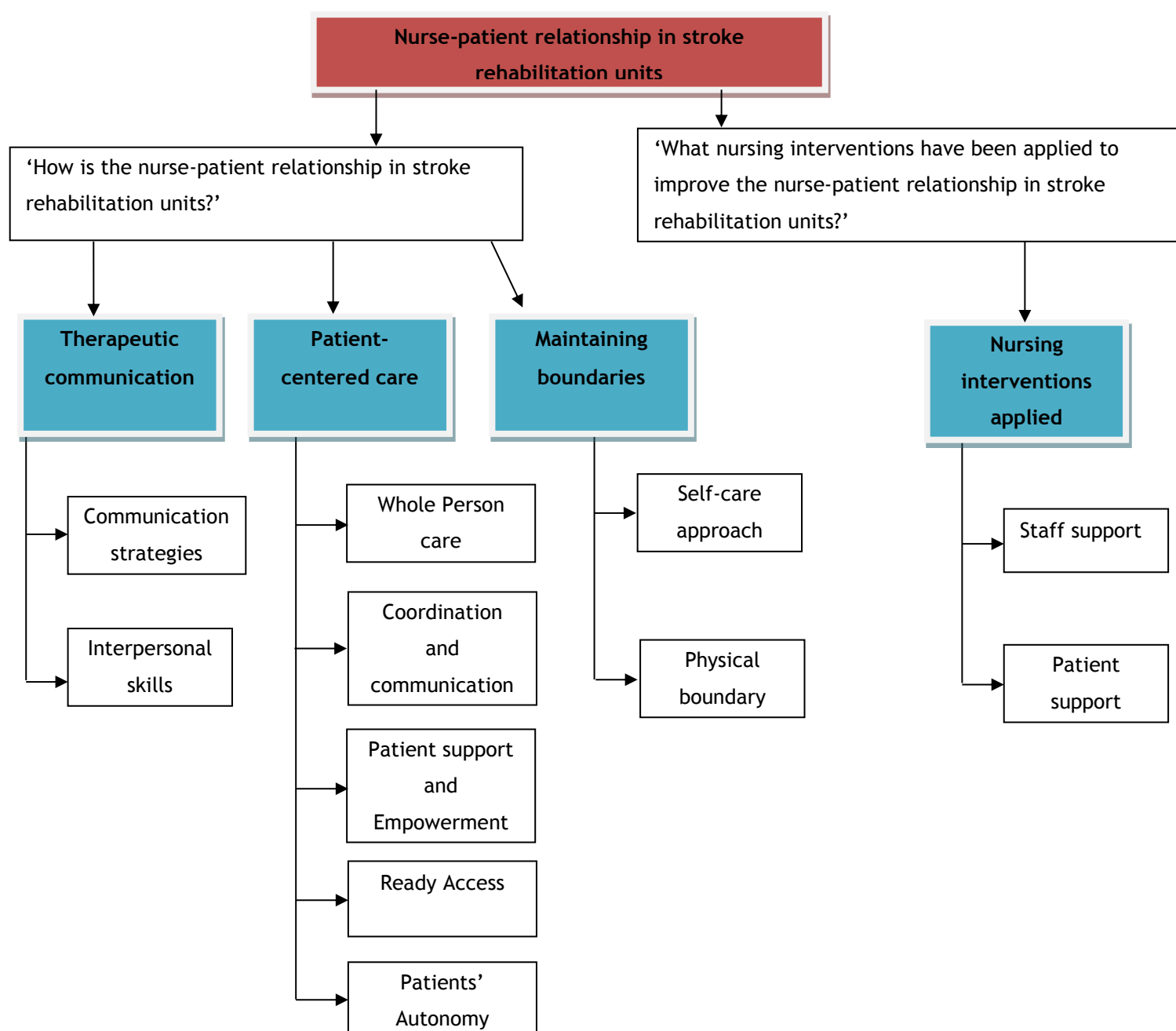


Figure 7: Data analysis for nursing interventions

5 Findings

In this section 8 research articles were reviewed from evidence based literatures in relation to the purpose statement and research question and discussed in depth. The purpose of this study is to describe the nurse-patient relationships in stroke rehabilitation units using a systematic literature review. Where as the research questions are: ‘how is the nurse-patient relationship in stroke rehabilitation units?’ and ‘What nursing interventions have been applied to improve the nurse-patient relationship in stroke rehabilitation units?’ The findings were grouped into four descriptive categories of nurse-patient relationship: therapeutic communication, patient-centered care, maintaining boundaries and nursing interventions applied to improve the nurse-patient relationships as illustrated in figure 8.

Figure 8: Summary of findings



5.1 Therapeutic Communication

Communication is essential for the formation of nurse-patient relationships, but communication problems after stroke are very common, with stroke patients having aphasia or dysarthria. Almost all the selected studies put an emphasis on therapeutic communication especially with aphasia and dysarthria. Instigation of therapeutic communication was subdivided by communication strategies and interpersonal skills.

5.1.1 Communication strategies

Communication strategies were described in three of the articles. The strategies investigated focused mostly on conversational communication. Different strategies were used to initiate and advance the ethical relationships on rehabilitation units by both patients and nurses. Elderly patients' point of view, being aware of the nurses' names was easier to initiate a conversation. They viewed it as the foundation of the relationship and trust in the care. In the gender perspective of the elderly, they used discussion and questioning decisions as a tactic to create communication with the nurses. As at the same time, nurses used the same strategy through educating the patients about the affliction of the disease and its treatment as an opportunity for patients to ask questions.

In Japan, reflexive behavior was used by professionals as an approach to promote ethical relationships. This approach was also referred to as 'individually suited approach'. 'Professionals adapted their behavior and communication style according to what worked best with each patient' (Slingsby 2006). It was included that, the aim of this approach was to develop a relationship trust. In order to handle situations where nurses faced obstacles affecting their attitudes, they developed different strategies such as humor, self-control and walking away to deal with the tension. However, in one of the articles researched by Gordon, it was observed that aphasia and dysarthria patients were given less opportunity to express themselves. It included that nurses controlled all the communications.

5.1.2 Interpersonal skills

Four out of the eight studies discussed interpersonal skills in the nurse - patient relationship. The studies had five common steps to expressing interpersonal skills in rehabilitation. These steps included assessment, planning, decision making, review and evaluation and ending and closure as illustrated in figure 9. From the article of opting in and opting out, nurses believed the way of action between patients and nurses on rehabilitation units was different from the acute wards. The term 'opting in and opting out' was to show how nurses made decisions on

patients' care in the rehabilitation process. In this study, the nurses initiated rehabilitation after assessing the patients' particular context; they used assessment to determine which strategy is important to use in planning care, which they called 'coaching patients to self-care'. After assessing the patients, nurses started the planning stage through teaching, cueing and promoting, encouraging, bargaining, and persuading. When the assessment and planning was done, nurses then made decisions on how to interact with the patients. Following the made decision, interventions were made aiming at problem solving based on the formula of 'opting in' by engaging in the process or 'opting out' by providing no assistance. Reviews and evaluations were made after understanding the patient's needs. Nurses provided feedback and re-arranged the physical environment whenever it was necessary.

Based on the research of Slingsby in Japan, professionals assessed the patient's motivation towards rehabilitation right before starting the rehabilitation process. Then when the motivation was assessed, nurses initiated the rehabilitation process though adapting their own behavior and communication style which worked best with each individual patient. The decision-making was mostly between the patients' family and the professionals as wished by the patients themselves. The article about elderly people's experiences, patients were involved in planning their rehabilitation through rehabilitation classes and individual training as a way to gear personal goals. It was also mentioned that they received help only when they needed it. Just like Slingsby's research, in this study family members were also involved in the decision making. Barreca & Wilkins (2008), also mentioned repetitive training after stroke as very important. All trainings are considered as interpersonal interactions.

In the article about supporting stroke patient's autonomy during rehabilitation, it was mentioned that at the end and closure (at discharge), patients' autonomy increased. Before discharge patients were just instructed and supervised by the caregivers to prepare for discharge environment and attain as much independence as possible. At this point the supervision is reduced little by little.

Figure 9: The five steps of interpersonal skills



5.2 Patient-centered care (PCC)

Patient-centered is the key attribute to quality care. Patient-centered care involves staff communicating effectively to understand patients' needs, thus enhancing their wellbeing and maintenance of autonomy. The PCC also has the potential to reduce nursing staff burnout and reduce turnover in facilities. By improving communication, patient will become less agitated and caregiver interactions less stressful. From the findings the five descriptive categories of patient-centered care were identified; whole person care, coordination and communication, patient support and empowerment, ready access and patients' autonomy.

5.2.1 Whole person care

The whole person care was identified in four of the reviewed articles. Most stroke survivors are disabled and rely mostly on the caregiver in their activities of daily living. The writers

believe in holistic care; the whole of a person's needs (physical, mental and social). Patients are different and treatment was individualized according to their needs. In one of the study a patients emphasized the importance of the being able to talk to a professional who has knowledge to help them adjust through this process. To be able to talk about cognition, emotions, their sickness, not being left alone with thoughts and feelings was a very important part in the process. It could be of the interest of this study to use this phrase by a patient; *"I haven't been able to talk with the staff about my emotional and cognitive pondering, the staffs are too busy"* (Bronken, Kirkevold, Martinsen & Kvigne 2012).

Another study pointed out that unmotivated patients during the rehabilitative process were not necessarily difficult but simply require a different and individually suited approach. Patients' motivation was viewed as determinant to rehabilitation outcome, and also believed to be a direct product of fostered fiduciary relationship and effective patient interaction. In rehabilitation the focus for interaction is thought to be patient's goals, worries or plans for the future.

In the study where elderly people share their experiences of nursing care after stroke, nurses were less important in bringing consolation for the sorrow caused by the illness. Both men and women stated that they hide their sorrow from the nurses. Some participants felt that nurses were not prepared to share their sorrow. Both women and men actively preferred not to involve nurses in their emotional struggles.

5.2.2 Coordination and communication

Coordination and communication could be seen between the aphasia story teller and the nurse. There was give and take of information both verbally, nonverbally, through listening, drawing, signs and pictures etc. The relationship and the collaboration process were described with words such as open, trusting, flexible, and good. The aphasia story teller regarded the linguistic facilitation during the collaboration process to be very important. She felt understood both in terms of her expressions and her situation as a stroke survivor with aphasia.

Conversations with patients were controlled by nursing staff around nursing tasks. Patients felt they had little opportunity to contribute to, or influence, the flow of conversation because of their disabilities. Dialogue was viewed as institutional, discussions being focus on one part. Effective nurse-patient communication is required to form therapeutic relationship and negotiate care.

5.2.3 Support and empowerment

Supporting and empowering patient during rehabilitation is guiding them to self-care. In the study where elderly people share their experiences of nursing care after stroke, nursing care was seen to be important in the form of support and encouragement. It was also referred to as a struggle to reclaim the body and to be connected closely with the task of recovery, adjustment and reorientation to be restored to health. Irrespective of gender, it appeared that this was essential to mark independence, whatever the patient's disabilities and need of help in daily life.

The recovery process following stroke was referred to as a “demanding journey” where the survivors move through different phases as various challenges unfold. The nurse was described as the “escort car” that provides the support and needs that the survivors need during the “journey of recovery” (Bronken et al. 2012).

The primary contribution nurses made to inpatient rehabilitation was working directly with patients, enabling them to self-care and independence. Also nurses helped patient to cope and adjust with their situation. They also contributed to patient's care by finding out about patient, informing patients, engaging patient in a therapeutic relationship, motivation patient to participate and creating a rehabilitative milieu.

5.2.4 Ready access

Ready access implies to patient having ready access to care. There are nurses ready at any given time to attend to them. In the study of an aphasia patient, the importance of not being left alone with thoughts and feelings was emphasized. It was easy to talk with professional who has knowledge and the patient could just talk only about her thoughts feelings.

Patient experienced positive nursing care; they received help when they needed it. Nurses came when they were called for help. Nurses expressed how much they enjoyed providing care to survivors of stroke. They felt fulfilled when they knew they had helped somebody get better. Nurses described their role as essential and extensive, they work 24/7 as they help patient to relearn how to perform various functional tasks.

5.2.5 Patients' autonomy

Stroke patients' perspective on autonomy in different phases during the rehabilitative process was revealed from the findings which include; admission, rehabilitation and discharge phases. Autonomy depends on a person's current development and environment, including environmental support, and represents a social concept of autonomy, which includes support by the environment. On admission, support and paternalism facilitate patient autonomy. During rehabilitation, moderate support and supervision and partial paternalism regarding only treatment, facilitate patient autonomy. At discharge, patient autonomy is facilitated by giving information and shared decision making, including about treatment. Approach used to changing autonomy includes; from full support, through moderate support and supervision, to reduced supervision; and from paternalism, through partial paternalism, to shared decision making.

Patients mentioned autonomy as the most important determinant of their quality of life. Also the important maintaining autonomy in the care of stroke patients was stressed. During the rehabilitation process autonomy increased, patients' role in rehabilitation developed from passive to active. The pace of improvement (and the length of each phase) differed among patients. Ethicists discussed at least three concepts that were important regarding to stroke patients' autonomy and rehabilitation: self-governance, self-realization and actual autonomy.

The control of patients' autonomy was seen during the conversations of nursing staff and patient. The nurses controlled the conversation process with little opportunity for the patient to contribute to, or influence, the conversation flow.

In the Andersson & Hansebo, 2009 study, patients shared their experiences in their lack of participation in their care. Professionals' expertise and power limited them from the opportunities of describing what is most important to them in rehabilitation. Men showed vulnerability, they wished to manage by themselves and felt vulnerable when they had to rely on nursing care that involved bodily care.

5.3 Maintaining boundaries

The nurse-patient relationship is the foundation of a successful care and treatment. This involves some level of intimacy that is touching, disclosure of very personal information by the patient about their health, feelings and concerns. To explore treatment issues in a safe therapeutic relationship, professional boundaries establishment and maintenance has to be established to create a rational space between the nurse and the patient. For successful establishment and maintenance of these boundaries, the understanding of power differences

within the nurse and patient relationship is essential. Therapeutic relationship is built on the basis of respect, trust and appropriate use of power (Taylor 2002). All these aspects of the relationship focus mainly on patients' needs.

To be able to maintaining this relationship during the rehabilitative process, there is the need for boundaries. Maintaining boundaries in this study was related to the extent to which nurses provided support to patient during the rehabilitation process and patient's perspectives on physical care by nurses.

5.3.1 Self-care approach

Self-care approach was use to maintain boundaries during care on when nurses made decisions on when and how to, as well as how and how not to, contribute to inpatient rehabilitation using "opting in and opting out". Nurses opted in to patients' care by doing for patients, maximizing patient effort through teaching, cueing and prompting, encouraging, bargaining, persuading, providing feedback and as necessary, rearranging the physical environment as well as helping patient learns from their mistakes. Conscious decisions to opt out lead nurses to stand by and provide no assistance.

Nurses believe their education prepares them to provide care and comfort to patient; it was difficult to watch patients become frustrated during a task. Not only did the nurses struggle with their own feeling of wanting to do everything for the patient, they also fear criticism when they tried to carry out the rehabilitation nursing role.

In the articles about supporting patient autonomy, nurses use the rehabilitation phases to set boundaries. On admission, the nurses gave full support to the patients. During rehabilitation, support was reduced, training and supervision was made. Towards discharge, supervision was reduced and mostly instructions were given.

5.3.2 Physical boundaries

Nurse-patient relationship is a care partnership that often involves intimate touching needed to provide treatment. It is a necessary component of effective nursing and must be based on trust and respect (Griffith 2013).

In the study of the elderly patients from a gender perspective, they shared their experiences when dealing with nurses in care relating to their body. Men expressed embarrassment being naked in front of nurses, and also that nurses were sometimes shy of their nude bodies. By conforming to the role of patient they may feel less embarrassed and the relationship

between nurse and patient can become neutral. The male patients also preferred female nurses during bodily care.

5.4 Nursing interventions

Considering the fact that there are rising numbers of stroke survivors with different disabilities, interventions were applied to improve the nurse - patient relationship during rehabilitation. Two of the selected articles contained different interventions which mainly focus on patients with communication impairments.

5.4.1 Staff support

One of the studies targeted patients with severe receptive aphasia on a post-stroke long-term caring unit. The study aimed at educating, training and supporting nurses about effective communication with patients with communication impairments following a stroke. As one of the solution, investigators introduced individualized communication care plans to avoid communication problems. The communication care plan educated nurses to communicate with the patients, the patients' way of communication, what the patient behavior means and habits. The program utilized communication kits for each selected patient. Nurses were trained to use the communication kits.

Another intervention was through a workshop for nurses focusing on communication and behavior management strategies. Communication management strategies included conversational partners and nonverbal techniques for example gestures, writing, drawing, using pictures and other resources. Moreover, a practice model called REAP was introduced as a behavior management strategy. REAP meant Relate well, Environmental manipulation, Abilities focused care and Personhood respectively. With the guide of the REAP model, nurses were taught that the ability to relate well was important in the nurse-patient interaction, introducing different strategies for instance agitated patients approach with a calm voice and gentle touch.

Furthermore, concept of intervention in this study was implementation of staff support system which involved feedback to nurses who required new skills, observation of nurses' interaction with patients, and providing teaching at the patient's bedside when needed. The support system was carried out by the facility speech-language pathologist.

5.4.2 Patients' support

According to Bronken, 2012, co-constructing stories were established between a nurse and an aphasia patient. In this article, the nurse used an interactive process of co constructing stories as a communication intervention with the aphasia patient. The nurse communicated with the aphasia patient by slow and clear speech, highlighted of key words in worksheets, pointed to visual illustrations and watchful to the patient's non verbal signs.

Furthermore, active listening and encouragement of the patient through asking questions, guessing, and assist in finding words used to communicate. Additionally, pictures were explored by the nurse and patient to simplify word construction. The nurse verbalized interpretations of the patient's stories to cross checking whether it is what the patient meant.

In the study by McGilton et al, interventions were made to improve communications among nurses and patients with communication impairments. Communication plans for each selected patient were formed. Each patient was also provided with a communication kit which they were trained to use.

6 Discussion

Stroke rehabilitation institutions are at a steep rise due to the dramatic increase in the number of disabilities caused by stroke. Stroke is a major health challenge, especially in Western healthcare systems. Beside death it leaves the patient with serious and long-term disabilities, serious burden to the families and the community. An important intervention in this area of healthcare is the stroke unit (Sun, Paulus, Maervoet & Saka 2013). The purpose of this study is to describe the nurse-patient relationships in stroke rehabilitation units using a systematic literature review.

A systematic literature review was conducted and 8 articles were selected for findings. Two research questions were formed from the topic which included; 'how is the nurse-patient relationship in stroke rehabilitation units?' and 'What nursing interventions have been applied to improve the nurse-patient relationship in stroke rehabilitation units?' In order to answer these questions, data analysis to describe the nurse-patient relationships on rehabilitation units as stated in the purpose statement was done. Four themes were formed from the findings; therapeutic communication, patient-centered care, maintaining boundaries, and nursing interventions applied to improve the nurse - patient relationships. In this part of the thesis, therapeutic communication, Patient-centered care and nursing interventions applied to improve the nurse - patient relationships were further discussed.

From the selected studies, the importance of therapeutic communication as the basis of the nurse - patient relationship is clearly viewed. Therapeutic communication is the face-to-face process of interacting that focuses on advancing the physical and emotional well-being of a patient (National Commission on Correctional Health Care 2001). Many studies have outlined the communication strategies used during stroke rehabilitation with the target of effective communication. The objectives of nurses were to support patients through out the rehabilitation process. Some authors agreed that nurses controlled the communication during rehabilitation of patients with aphasia and dysarthria patients. In agreement with that were (Gordon et al. 2009) who concluded after a conversational qualitative approach follow up, that nurses controlled the topics and flow of conversations of patients that had communication impairments. The ability to talk, read and write are usually taken for granted (Broken et al. 2012).

The belief of a number of authors about therapeutic communication in stroke rehabilitation units was leaned on family's involvement in the rehabilitation process. Moreover, patients wished their family members to participate in rehabilitation for effective communication. Slingsby (2006) believed that it was the foundation of the fiduciary relationships that allowed the exploration of patients' motivation to rehabilitation. He added that, fiduciary

relationships contributed to effective patient interaction and determined the outcome of the rehabilitation process.

From the findings, patient centered care was identified as a key attribute to quality care and could be achieved by building a therapeutic nurse-patient relationship. It involved staff communicating effectively to understand patient's needs, thus enhancing their well being and maintenance of autonomy. By improving communication, patients will become less agitated and caregivers' interactions less stressful. From the findings the five attributes of patient-centered care were identified; whole person care, coordination and communication, patient support and empowerment, ready access and patients' autonomy.

Patient-centered care focuses on the patient and their health care needs. It aims at empowering patients to become active participants in their own care. It also requires the care providers and the multi-professional team to develop effective and good communication skills to address patient needs properly. Besides all these, patient-centered care requires the care giver as an advocate to patients and strives to provide effective and safe care (Reynold 2009).

Nurses achieve client-centered care by actively including the client and significant others as partners in the care; patient wishes, goals and preference identified as basis of their care plan; recognizing that the client's well-being is affected by the nurse's ability to establish and maintain a therapeutic relationship; acknowledging that biases and feelings can affect the nurse-client relationship (college of nurses of Ontario 2006).

It was identified in one of the finding that during the rehabilitative process, patients were not necessarily difficult but simply required a different and individually suited approach. Patients' motivation was viewed as determinant to rehabilitation outcome, and also believed to be a direct product of fostered fiduciary relationship and effective patient interaction. Nurses often adapt their behavior and communication style according to what works best with each patient. This was done aiming at fostering a relationship of trust (Slingsby 2006). This clearly shows that patients' motivation during rehabilitation is closely related to the relationship, behavior and communication style of the nurse.

Another issue of importance that emerged in the finding was guiding patients to self-care. Nursing care was seen to be important in the form of support and encouragement. It was also referred to as a struggle to reclaim the body and to be connected closely with the task of recovery, adjustment and reorientation to be restored to health. During the recovery process nurses were referred to as "escort car" to provide support and needs to stroke survivors through the different stages (Bronken et al. 2012). As a nurse being able to provide this

support, guidance and needs to patients requires a good nurse-patient relationship, effective communication and ability to treat patient individually.

Patients mentioned autonomy as the most important determinant of their quality of life. Also the importance of maintaining autonomy in the care of stroke patients was stressed. During the rehabilitation process autonomy increased, patients' role in rehabilitation developed from passive to active. It was stressed that the pace of improvement differed among patients. In one study three concepts that were important to stroke patients' autonomy and rehabilitation were discussed: self-governance, self-realization and actual autonomy. Self-governance is generally described as acting voluntarily and consciously without any constraint. Self-realization also includes the way one shapes and lives one's own life and expresses individuality. Self-governance and self-realization represent an individual concept of autonomy, which stresses the independence and authenticity of the individual person, protects the individual against unwanted interference by others, and places informed consent at the centre.

In the findings section the study, patient and staff support interventions towards the improvement of the nurse-patient relationships on stroke wards were cited. An article by (McGilton et al. 2012) mentioned the use of communication plans as the best way to stroke patient rehabilitation care management. These communication plans were used to assess the patient's behavior and learn how to manage it. A communication kit to every patient was used as a tool to making communication easy. Patients and workers were taught how to use this tool appropriately.

Furthermore, workshops for nurses were organized to train them about communication strategies and behavior management. During these workshops, nurses learnt about promoting patients' ability to communicate and acknowledge patients. The behavior management training focused on techniques to be used in consideration of the REAP (Relate well, Environmental manipulation, Abilities focused care and Personhood) model. With this model, different strategies were introduced for example, calm voice, gentle touch, and calm approach towards agitated patients; reduction of environmental noise while communicating with patients having hearing problems; nurses' compensation where necessary; and knowing the patients, becoming familiar, and gaining knowledge of their life. These were all considered as a way to provide holistic nursing and contributed to ease communication. Feedback is the best approach to all improvements. Support to the nurses through feedback was suggested as a way to help nurses improve their nursing skills. Nurses were occasionally supervised by the speech pathologist to evaluate the methods thus also contributing to the feedback process (McGilton et al. 2012).

7 Trustworthiness

The perspectives of qualitative research are credibility and trustworthiness. Improving the trustworthiness of content analysis begins with thorough preparation prior to the study and requires advanced skills in data gathering, content analysis, trustworthiness discussion, and result reporting (Elo, Kääriäinen, Kanste, Pölkki, Utriainen & Kyngäs 2014).

Before the commencement of this thesis, a thesis contract and plan was written and accepted by the supervisor. The methodology of the study was deeply studied and understood by the two writers prior to data research process. Planning a thesis beforehand minimizes the chances of misleading results. This thesis produces valuable findings which are both relevant to the purpose statement and answer the research questions.

It is important to scrutinize the trustworthiness of every phase of the analysis process, including the preparation, organization, and reporting of results. The trustworthiness of content analysis results depends on the availability of rich, appropriate, adequate and quality data. Data collection, analysis, and result reporting has to be congruent. The trustworthiness of data collection can be verified by providing precise details of the sampling method and participants' descriptions (Elo et al. 2014). Data was collected from academic databases using NELLI portal and conducted by two writers. These databases used were PUBMED, EBSCO (CINAHL), EBSCO (Academic Search Elite), and SAGE, which gave reliable results. During this study process data was truthfully analyzed and findings from selected data reported truthfully avoiding bias as much as possible.

Researcher strategies that facilitate this process include prolonged engagement, persistent observation, and reflexivity (Houghton, Casey, Shaw & Murphy 2013). Both writers were fully engaged in the process and there was constant communication about findings and flexibility amongst the writers. Both writers always found a way to common understanding. The criteria set to guide the process was constantly checked at every stage of the process to avoid mislead of the study.

Approaches used in each phase of the research process recognize the criteria and also enrich the credibility and trustworthiness of the study (Polit & Beck 2012). The criterion used during the research was English language, which is best understood and interpreted by both writers. There was no need for translation which might have caused errors due to misunderstanding and misinterpretation of data. Data was selected from articles written from 2005 to 2014 which contributed in bringing out recent knowledge to the study; articles were full text (except Pubmed where free full text was used). Keywords used during the data extraction process were relevant to the purpose of the study. These keywords include: Nurse, Patient,

Nurse-patient Relationship, and Stroke Rehabilitation Unit which were defined previously to give the reader an understanding of their meanings. This process was done by two writers such that misinterpretation of data is avoided and in cases where doubts, clarification was done using dictionary and other online sources.

8 Ethical Consideration

Ethical issues and standards must be critically considered during a qualitative research as well as any other research. These ethical issues include informed consent, participants-researcher relationships, gaining access, confidentiality, anonymity, sample size and data analysis. Ethics are rules distinguishing right from wrong. They are norms of conduct that distinguish acceptable and unacceptable behaviors (Resnik 2011). Since the study was a systematic literature review, there was no need for informed consent but the writers were also obligated to quote the source and respect the publication rights of the owner. References of data used were listed in alphabetical order according to Laurea's guidelines.

Resnik (2011) describes the importance of sticking to ethical norms in research. Firstly, ethical norms promote the aim of research, that is, knowledge, truth, avoidance of errors, and misinterpretation of data. The purpose of this thesis is to describe the nurse-patient relationship in stroke rehabilitation units. There is dramatic increase in the number of stroke survivors with disabilities who need nursing support. This support is best provided through building a therapeutic relationship. Research has been done about nurse - patient relationships but no research found concerning stroke rehabilitation. It is important to search for knowledge on this topic so others could benefit from the results. This research has been done by two writers which guaranties no misinterpretation of data and errors.

Ethical standards promote the values that are essential to collaborative work such as, accountability, mutual respect and fairness. Both writers participated and were fully committed to the work throughout the process. There was also mutual respect and understanding from both parties. The writers understood the values of ethics and were accountable for their actions. Laurea's guideline on thesis writing was followed and search was done using NELLI database with assistance from professionals of the technical department of Laurea University of Applied Science.

The nature of qualitative methods requires that the researchers remain alert to the possibility of unanticipated ethical dilemmas (Speziale & Carpenter 2007). Ethical considerations were taken into account at all phases of this thesis. The data collection process was explained from beginning to end following the guideline of a systematic literature review allowing the reader to follow the process step by step on how the results were found.

9 Limitations and recommendation

Considering the research process, this thesis has limitations even though the aims and purpose of the study have been reached. Limitations of research are defined as characteristics of design or methodology that impacted influence in application or interpretation of the results of a study (USC libraries 2014).

The major limitation of this study was to fully access articles. Most of the good articles were limited to access though other libraries were also visited. For that reason, the review might have missed out on very essential and relevant data. Another limitation was the language of research. In this systematic literature review, one of the criteria of search being articles published in English language, excluded a lot of articles published in other languages. English language is the language which both writers can read and interpret well given the fact that there was not enough time to translate other articles. Lack of financial resource might have limited the research as well.

Surprisingly, there is less research done on nurse patient relationships in stroke rehabilitation. Most of the research referred to physiotherapists and ways of self rehabilitation. Others leaned more on defining stroke as a disease. Despite of all the limitations, this research is suitable for readers who intend to get information about nurse- patient relationships on stroke rehabilitation units. Moreover, the writers gained skills of team work, learnt how to research using systematic literature review and definitely also learnt how to plan a research.

For future studies, the writers recommend more research on the other stroke disabilities and an action based research method. There are a lot of studies on aphasia, emotional disturbances and dysarthria. However, there are no studies found on other stroke disabilities i.e. pain (paresthesia), and cognitive problems. Therefore, specific studies on these disabilities are definitely needed to improve nursing care. Secondly, the thesis being literature based, there is a need for an action based research to verify and analyze the findings. This can be done by gathering professional or patients' experiences considering all disabilities cause as a result of stroke.

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Appendices

Appendix 1

SOURCE	RESEARCH TITLE	AIM OF RESEARCH	RESEARCH METHODS	PARTICIPANT	FINDINGS & SIGNIFICANCE TO THIS STUDY
Bronken, B. et al (2012)	The Aphasic Storyteller: Co-constructing Stories to Promote Psychosocial Well-Being After Stroke.	Illuminates how an interactive process of co-constructing stories was established between an aphasia patient and a nurse within the context of a longitudinal psychosocial intervention during the first year after stroke.	Qualitative research using interviews and participants observation	An aphasia patient and nurse specialist	The encounters between the aphasia patient and the nurse as a rehabilitative approach showed improvement with communication.
McGilton et al. (2012)	Patient-centered communication intervention study to evaluate nurse-patient interactions in complex continuing care.	To implement Patient-centered Care Communication intervention, with the objective to educate, train and support nursing staff in communicating effectively with patients who have communication impairments as a result of a stroke.	A quasi-experimental nonequivalent group design.	60 Patients with communication impairment post-stroke, 30 nursing staff, 3 Speech Language Pathologist (SLP),	It focuses on educating nursing staff on how to communicate effectively with patients having communication impairments as a result of stroke (Aphasia).

Gordon et al. (2009)	The use of conversational analysis: nurse-patient interaction in communication disability after stroke	To explore how nursing staff and patients with aphasia or dysarthria communicate with each other in natural interactions on a specialist stroke ward.	A qualitative methodology using conversational analytic approach (video recordings)	14 nursing staff and five patients with aphasia or dysarthria	The study describes the nurse-patient interaction. The conversation was controlled mostly by the nurse leaving the patient with little opportunity to influence the conversation flow.
Andersson Å. & Hansebo G. (2009)	Elderly peoples' experience of nursing care after a stroke: from a gender perspective	The aim of the study was to explore, from a gender perspective, older people's experiences of nursing care after a stroke	Qualitative content analysis of using interviews	Five women and five men between 66 and 75 years of age who were being cared for at a stroke rehabilitation ward	It describes the importance of nurse-patient relationship to stroke patients
Barreca S. & Wilkins S. (2008)	Experiences of nurses working in a stroke rehabilitation unit	To explore the perceptions, beliefs and feelings of a group of nurses who provided care to individuals admitted to a stroke rehabilitation unit	A qualitative method using an interpretive phenomenological interview	8 nursing staff on a stroke rehabilitation unit volunteered to be interviewed	Nurses views about working in a stroke rehabilitation unit

Pryor et al. (2009)	Opting in and opting out: a grounded theory of nursing's contribution to inpatient rehabilitation	To develop a grounded theory of nursing's contribution to patient rehabilitation from the perspective of nurses working in inpatient rehabilitation.	Grounded theory method	35 registered and 18 enrolled nurses	"opting in and opting out" represents nurses' decisions about when and how to, as well as how and how not to, contribute to inpatient rehabilitation
Slingsby B. (2006)	Professional approaches to stroke treatment in Japan: a relationship-centered model	To examine how stroke professionals in Japan approach rehabilitation therapy.	Qualitative research based on Grounded theory	4 nurses, 4 doctors, 2 clinical psychologists, 4 physiotherapists, 4 occupational therapists, 3 speech therapists, 48 patients and 26 patient families	The study showed that professionals recognize fiduciary relationship to be a key determinant of patient motivation and overall rehabilitation outcome.
Proot et al (2007)	Supporting stroke patients' autonomy during rehabilitation	To explore stroke patients' experiences of health professionals' approach towards autonomy in a longitudinal way.	Qualitative research using grounded theory	22 stroke patients	The study describes autonomy from patients' perspective